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Kelas:PTIK C 2020

Tugas 3 Pengolahan Citra Digital

1. Buat histogram citra 3 bit dibawah ini

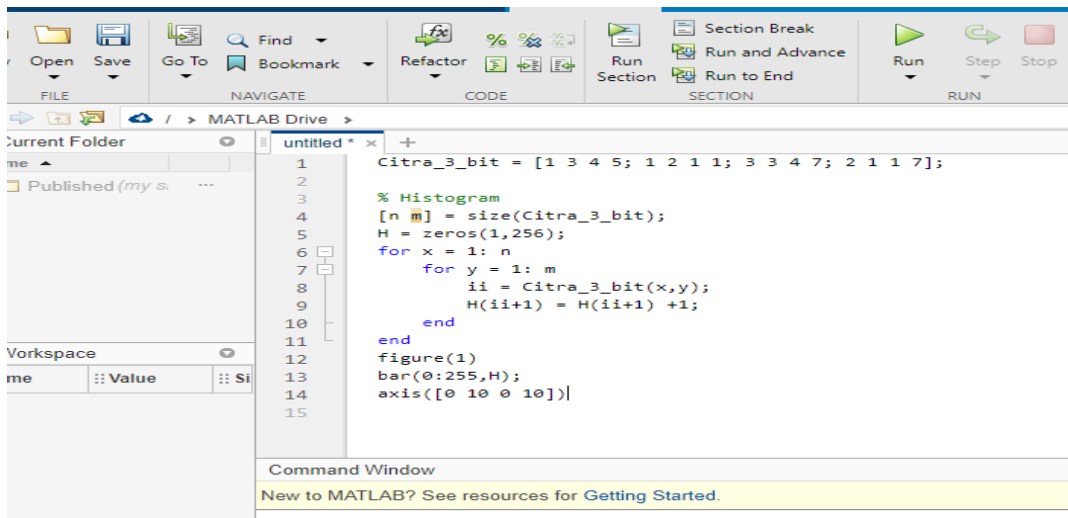
1	3	4	5
1	2	1	1
3	3	4	7
2	1	1	7

2. Cari distribusi komulatifnya (grafiknya ditampilkan)
3. Lakukan proses histogram equalisasi (tuliskan matriks citra hasil equalisasinya)

Jawaban:

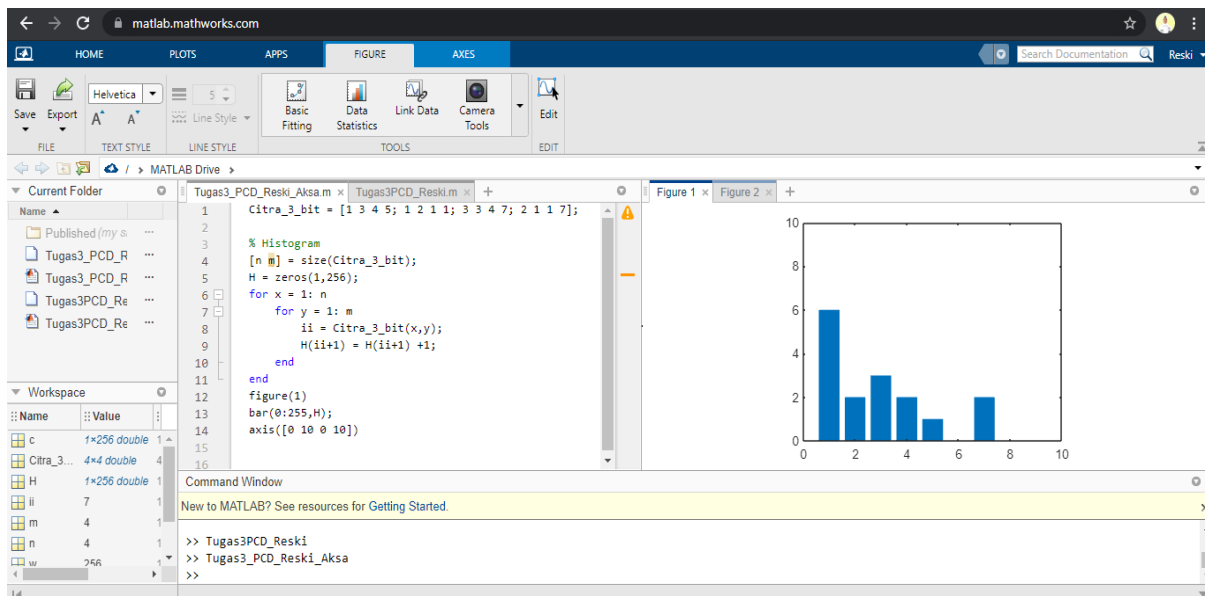
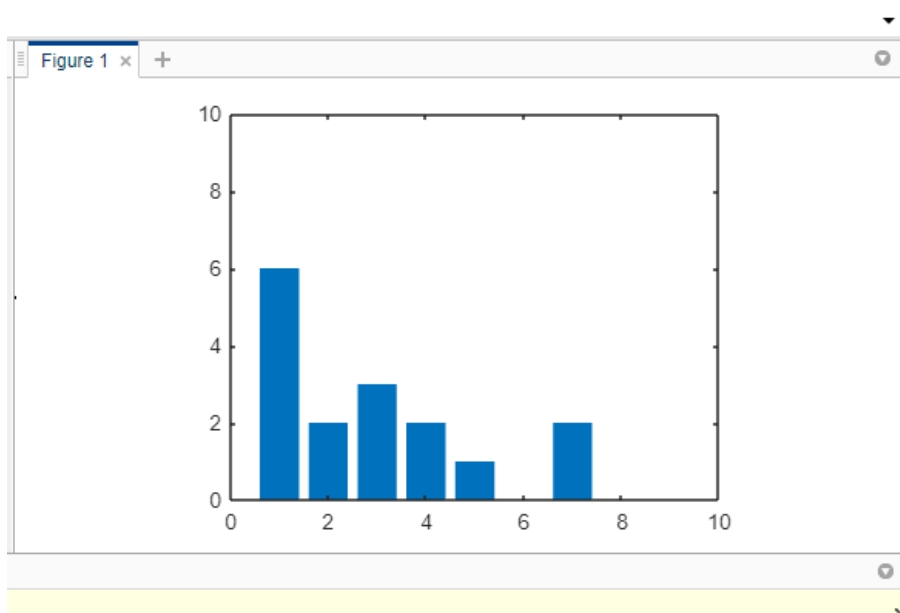
1.Histogram Citra

Program

The image shows a MATLAB script editor window with a toolbar at the top containing icons for file operations (Open, Save, Go To), navigation (Find, Bookmark), code editing (Refactor, % comments, %doc), and execution (Run, Run and Advance, Run to End, Run, Step, Stop). The script defines a 4x4 matrix 'Citra_3_bit' with values [1 3 4 5; 1 2 1 1; 3 3 4 7; 2 1 1 7]. It then calculates the histogram by iterating over each element, finding its value 'ii', and incrementing the count in the 'H' array at index 'ii+1'. Finally, it displays the histogram as a bar chart with 'figure(1)', 'bar(0:255,H)', and 'axis([0 10 0 10])'. The Command Window at the bottom shows a message: 'New to MATLAB? See resources for Getting Started.'

```
1 Citra_3_bit = [1 3 4 5; 1 2 1 1; 3 3 4 7; 2 1 1 7];
2
3 % Histogram
4 [n m] = size(Citra_3_bit);
5 H = zeros(1,256);
6 for x = 1: n
7     for y = 1: m
8         ii = Citra_3_bit(x,y);
9         H(ii+1) = H(ii+1) +1;
10    end
11 end
12 figure(1)
13 bar(0:255,H);
14 axis([0 10 0 10])|
15
```

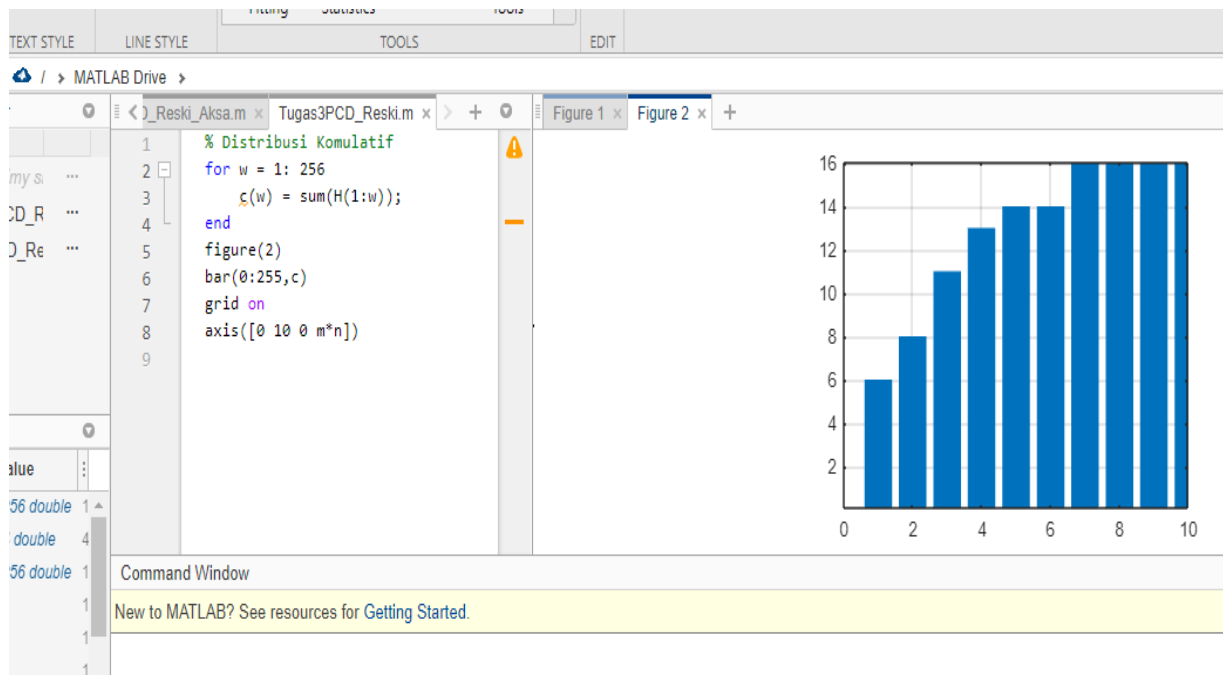
Hasil



2. distribusi kumulatifnya (grafiknya ditampilkan)

w	Frekuensi	Fk(cw)
1	6	6
2	2	8
3	3	11
4	2	13
5	1	14
7	2	16

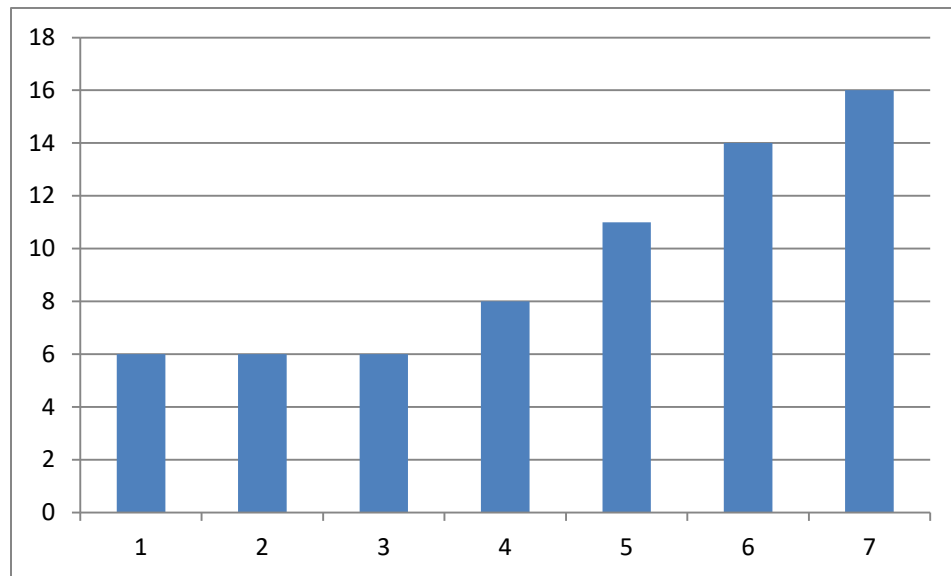
Program dan Hasil



3. Histogram Equalization

w	cw	W baru
1	6	3
2	8	4
3	11	5
4	13	6
5	14	6
7	16	7

Grafik



Citra Equalization

3	5	4	6
3	4	3	3
5	5	6	7
4	3	3	7